WHAT IS CLAIMED IS:

1. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine comprising:

a permanent magnet type dynamo-electric machine, said permanent type magnet type dynamo-electric machine having a stator having a stator iron core around which a stator coil is wound, and a rotor arranged in said stator at a rotational gap, having a plurality of permanent magnets arranged and fixed within a rotor iron core in a peripheral direction, and having auxiliary protruding poles;

said dynamo-electric machine and an engine being connected to a drive shaft in series; and

no switching gear between forward and backward movements being provided,

wherein a ratio between a maximum torque output by said dynamo-electric machine when the electric vehicle moves forward and a torque output by the dynamo-electric machine when reverse moving establishes a relation 1 : 1.05-1.2, whereby the torque at the reverse rotation becomes greater.

2. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 1, wherein a shape in a circumferential direction of said rotor at each pole is nonsymmetrical so that the ratio between the normal and reverse rotations establishes a relation 1 : 1.05-1.2, whereby the torque at the reverse rotation becomes greater.

3. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 1, wherein a width in a rotational direction of a permanent magnet inserting hole provided within said rotor iron core is larger than a width of said permanent magnet, and a space generated by a difference of length between the both is arranged in a forward movement side of said electric vehicle.

4. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 2, wherein a width in a rotational direction of a permanent magnet inserting hole provided within said rotor iron core is larger than a width of said permanent magnet, and a space generated by a difference of length between the both is arranged in a forward movement side of said electric vehicle.

5. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 1, wherein a permanent magnet inserting hole provided within said rotor iron core is provided at a predetermined inclined angle (θ) with respect to a circumferential direction so that a distance from the rotational gap is greater in the normal rotation side of the dynamo-electric machine, and said permanent magnet is inserted to said inserting hole.

6. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 2, wherein a permanent magnet inserting hole

provided within said rotor iron core is provided at a predetermined inclined angle (θ) with respect to a circumferential direction so that a distance from the rotational gap is greater in the normal rotation side of the dynamo-electric machine, and said permanent magnet is inserted to said inserting hole.

7. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 5, wherein said inclined angle (θ) is 10 to 45 degrees (mechanical angle).

8. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 6, wherein said inclined angle (θ) is 10 to 45 degrees (mechanical angle).

9. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 1, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is a rectangular shape.

10. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 2, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is a rectangular shape.

11. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 3, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting

hole and said permanent magnet is a rectangular shape.

12. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 4, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is a rectangular shape.

13. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 1, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is an arc shape.

14. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 2, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is an arc shape.

15. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 3, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is an arc shape.

16. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in claim 4, wherein a cross sectional shape in the rotational direction of said permanent magnet inserting hole and said permanent magnet is an arc shape.

17. A hybrid electric vehicle employing a permanent magnet type dynamo-electric machine as claimed in

any one of claims 1 - 16, wherein a ratio between a width in a rotational direction of the permanent magnet inserting hole provided within said rotor iron core and a width in the rotational direction of said permanent magnet is 1 : 0.5-0.9.